

[illegible]

Table 1. Monthly Surface Air Concentrations of Radionuclides at BRW, MLO, SMO, and SPO during 1993—Continued

Site	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Nuclide: ^{137}Cs (mBq m $^{-3}$)												
BRW	<1.3	<0.9	<1.1	0.9a	<1.9	<0.5	<0.6	<0.7	<1.1	<2.0	<0.6	<1.7
MLO	<1.2	<2.1	<2.0	<2.0	<1.4	<0.8	<4.1	<3.4	<2.5	<0.8	<3.1	<3.6
SMO	<2.2	<2.3	<1.4	<1.6	<1.3	<1.6	*	<0.9	<1.3	<1.2	<1.6	<1.8
SPO	<1.2	*	*	*	*	*	*	*	*	*	<2.0	*
Nuclide: ^{144}Ce (mBq m $^{-3}$)												
BRW	<5.5	<3.3	<4.6	<2.1	<11.	<2.1	<3.6	<2.5	<4.5	<9.0	<3.0	<9.2
MLO	<5.3	<9.9	<8.0	<8.1	<6.7	<3.4	<18.	<18.	<12.	<3.1	<13.	<18.
SMO	<9.3	<11.	<6.5	<6.9	<7.2	<8.2	*	<3.9	<5.4	<5.8	<6.6	<7.6
SPO	<5.8	*	*	*	*	*	*	*	*	*	<9.4	*
Nuclide: ^{210}Pb (mBq m $^{-3}$)												
BRW	0.78	0.80	0.67	0.38	0.26	0.05	0.11	0.06	0.09	0.23	0.35	0.59
MLO	0.17 ^a	0.31	0.49	0.54	0.43	0.49	0.27 ^a	0.18	0.23	0.26	0.22	0.21
SMO	0.03 ^a	0.05 ^a	0.02 ^b	0.02 ^b	0.05 ^a	0.04 ^a	*	0.05 ^c	0.09	0.08	0.08	0.05
SPO	0.03 ^a	*	*	*	*	*	*	*	*	*	0.03 ^a	*

*No data

Uncertainty is < 20% except:

^aUncertainty is between 20% and 50%^bUncertainty is between 50% and 100%^cUncertainty is > 100%

DISCUSSION

During 1993 there was one reported significant release of anthropogenic radionuclides into the atmosphere. On April 6, 1993, radioactivity was accidentally released into the atmosphere during an explosion and fire at a reprocessing plant in the Tomsk-7 military nuclear complex located 16 km north of the Siberian city of Tomsk. Details about the release of nuclear materials from this accident and the atmospheric transport and detection of the debris have been previously reported [Lee *et al.*, 1993; Larsen *et al.*, 1994]. We suggest that the detection of ^{137}Cs at BRW during April (see Table 1) represents traces of the Tomsk-7 debris released during this accident [Larsen *et al.*, 1994].

The seasonal cycles of ^7Be and ^{210}Pb continue to follow those observed in previous years [Feely *et al.*, 1989; Larsen and Feely, 1986].

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